United States
Department of
Agriculture

Soil
Conservation
Service

Bozeman,
Montana

MONTANA
WATER SUPPLY OUTLOOK

January 1, 1986

OFFICE COPY

Foreward

How Forecasts Are Made

Most of the annual streamflow in the Western United States originates as snowfall. This snowfall accumulates high in the mountains during winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Predictions are based on careful measurements of snow water equivalent at selected index points. Precipitation, temperature, soil moisture and antecedent streamflow data are viewed in conjunction with snowpack data to prepare runoff forecasts. This report presents a comprehensive picture of water supply outlook conditions for areas dependent upon surface runoff. It includes selected streamflow forecasts, summarized snowpack and precipitation data, reservoir storage data and narratives describing current conditions.

Streamflow forecasts are cooperatively generated by Soil Conservation Service and National Weather Service hydrologists. Forecasts become more accurate as more data affecting runoff becomes known. For this reason, forecasts are issued that reflect three future precipitation conditions — Below Normal, Average, and Above Normal. These forecasts are termed reasonable minimum, most probable, and reasonable maximum. Actual streamflow can be expected to fall between the lower and upper forecast values eight out of ten years.

Snowpack data are obtained by using a combination of manual and automated measurement methods. Manual readings of snow depth and water equivalent are taken at locations called snow courses on a monthly or semi-monthly schedule during the winter. In addition, snow water equivalent, precipitation, temperature, and other parameters are monitored on a daily basis and transmitted via radio telemetry to central data collection facilities. Both monthly and daily data are used to project snowmelt runoff.

For More Information

Copies of Monthly Water Supply Outlook Reports and other reports may be obtained from the states listed below. Because of the limited space, snow survey measurements are not published in monthly reports. An annual snow survey data summary is published by the Soil Conservation Service for each of the western states. Historical snow survey data may be obtained at those same offices.

STATE	ADDRESS
Alaska	201 East 9th Ave., Suite 300, Anchorage, AK 99501-3687
Arizona	201 East Indianola, Suite 200, Phoenix, AZ 85012
Colorado (New Mexico)	2490 West 26th Ave., Denver, CO 80211
Idaho	304 North 8th Street, Room 345, Boise, ID 83702
Montana	10 East Babcock, Room 443, Federal Building, Bozeman, MT 59715
Nevada	50 South Virginia Street, Third Floor, Reno, NV 89505
Oregon	1220 Southwest 3rd Ave., 16th Floor, Portland, OR 97204
Utah	4402 Federal Building, 125 South State Street, Salt Lake City, UT 84147
Washington	360 U.S. Court House, Spokane, WA 99201
Wyoming	Federal Building, 100 East "B" Street, Casper, WY 82602

In addition to state reports, a Water Supply Outlook for the Western United States is published by the Soil Conservation Service and National Weather Service monthly, January through May. Reports may be obtained from the Soil Conservation Service, West National Technical Center, 511 Northwest Broadway, Room 547, Portland, OR 97209.

Published by other agencies:

Water Supply Outlook Reports prepared by other agencies include: California — Snow Survey Branch, California Department of Water Resources, P.O. Box 388, Sacramento, CA 98502; British Columbia — The Ministry of Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia, V8V 1X5; Yukon Territory — Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory, Y1A 3V1; Alberta, Saskatchewan, and N.W.T. — The Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W., Calgary, Alberta, T3C 1A6.

ADVANCED MONTANA SNOW SURVEY INFORMATION

JANUARY 1, 1986

SNOW COURSE	ELEVATION	DATE	SNOW DEPTH	WATER CONTENT	LAST YEAR	AVERAGE 1961-80
MONTANA						
ARCH FALLS	7350	1/02/86	14	2.5	4.3	5.7
ASHLEY DIVIDE	4820	12/28/85	15	3.0	5.8	3.3
ASHLEY LAKE	4000	12/28/85	13	2.8	3.6	2.7
BADGER PASS	6900	1/04/86	79	20.5	25.0	20.8
BADGER PASS BUTYL	6900	1/01/86	---	15.6	18.1	16.2
BANFIELD MTN BUTYL	5600	1/01/86	---	6.3	13.0	8.5
BARKER LAKES	8250	12/31/85	19	5.2	8.1	--
BARKER LAKES BUTYL	8250	1/01/86	---	5.3	8.4	8.1
BASIN CREEK	7180	1/02/86	14	2.9	5.2	3.8
BASIN CREEK METAL	7180	1/01/86	---	1.7	4.6	2.7
BEAGLE SPGS METAL	8850	1/01/86	---	3.8	4.7	3.2
BEAR PAW SKI AREA	5200	12/27/85	15	3.0	6.6	3.2
BEAVER CREEK BUTYL	7850	1/01/86	---	7.1	--	--
BIG SKY	7700	1/02/86	19	4.7	8.3	6.8
BLACK BEAR	7950	12/27/85	57	18.2	21.6	16.3
BLACK BEAR BUTYL	7950	1/01/86	---	17.0	21.3	15.5
BLACK PINE	7100	12/30/85	13	2.6	5.5	4.9
BLACK PINE BUTYL	7100	1/01/86	---	3.1	5.6	6.0
BLOODY DICK BUTYL	7550	1/01/86	---	4.4	7.0	5.8
BLUE LAKE	5900	1/04/86	48	11.0	16.0	10.8
BOULDER MTN BUTYL	7950	1/01/86	---	8.8	11.3	9.8
BOX CANYON METAL	6700	1/01/86	---	5.3	4.9	3.9
BOXELDER CREEK	5100	12/27/85	16	3.0	--	3.7
BRIDGER BOWL	7250	12/31/85	20	4.8	10.0	11.6
BRIDGER BOWL BUTYL	7250	12/31/85	---	4.9	9.4	11.3
BULL MOUNTAIN	6600	12/30/85	11	1.9	--	2.5
CALVERT CREEK	6430	12/31/85	12	2.0	5.4	--
CALVERT CREEK BUTYL	6430	1/01/86	---	1.8	5.0	4.6
CARROT BASIN	9000	12/31/85	45	13.8	13.5	16.2
CARROT BASIN BUTYL	9000	1/01/86	---	11.2	12.7	12.6
CASHE CREEK METAL	7800	1/01/86	---	3.9	4.6	2.7
CHESSMAN RESERVOIR	6200	12/27/85	9	1.8	2.6	1.5
CLOVER MEADOW METAL	8800	1/01/86	---	7.6	8.2	7.3
COLE CREEK	7850	12/30/85	32	9.2	5.6	9.0
COLE CREEK BUTYL	7850	1/01/86	---	8.7	4.9	7.4
COMBINATION	5600	12/30/85	11	1.7	2.1	2.0
COMBINATION BUTYL	5600	1/01/86	---	1.8	2.7	2.4
COPPER BOTTOM BUTYL	5200	1/01/86	---	4.5	8.6	5.8
COPPER CAMP BUTYL	6950	1/01/86	---	10.4	20.4	16.9
COYOTE HILL	4200	1/02/86	22	3.0	5.0	4.5
CRYSTAL LAKE METAL	6050	1/01/86	---	5.5	6.9	6.9
DAISY PEAK	7600	12/27/85	19	3.8	6.2	5.3
DALY CREEK METAL	5780	1/01/86	---	4.6	5.5	6.5
DARKHORSE LK. METAL	8700	1/01/86	---	8.3	16.4	10.1
DEADMAN CREEK	6450	12/30/85	20	4.6	6.5	5.1
DEADMAN CREEK BUTYL	6450	1/01/86	---	4.1	6.4	5.2
DESERT MOUNTAIN	5600	1/06/86	25	5.5	11.0	6.9
DEVILS SLIDE	8100	1/02/86	27	7.2	8.8	10.5
DISCOVERY BASIN	7050	12/31/85	14	2.9	4.9	4.7
DIVIDE BUTYL	7800	1/01/86	---	4.3	4.2	4.4
DIX HILL	6400	12/29/85	18	3.9	5.3	5.1
DUPUYER CREEK BUTYL	5750	1/01/86	---	4.2	6.2	--
EMERY CREEK	4350	1/06/86	31	5.2	12.8	6.3
EMERY CREEK BUTYL	4350	1/01/86	---	4.6	11.9	6.9
FISH CREEK	8000	1/02/86	17	3.6	5.4	4.3
FISHER CREEK BUTYL	9100	1/01/86	---	14.4	17.6	16.1
FLATTOP MTN BUTYL	6300	1/01/86	---	18.0	30.9	21.6
FLEECER RIDGE	7500	12/30/85	13	2.4	4.4	4.8
FROHNER MEADOWS	6480	12/27/85	12	2.2	3.7	3.7
GARVER CREEK BUTYL	4250	1/01/86	---	3.3	7.5	5.0
GIBBONS PASS	7100	12/26/85	23	6.0	11.9	9.4
GRAVE CRK BUTYL	4300	1/01/86	---	3.3	13.2	8.1
HAND CREEK	5030	1/02/86	22	5.0	8.5	5.6
HAND CREEK BUTYL	5030	1/01/86	---	3.6	8.5	7.0
HAWKINS LAKE BUTYL	6450	1/01/86	---	11.1	19.0	13.6
HEART LAKE TRAIL	4800	12/28/85	24	6.9	19.0	8.5
HEBGEN DAM	6550	12/30/85	22	4.8	4.6	5.0
HELL ROARING DIVIDE	5770	1/03/86	42	10.2	16.8	14.1
HOLBROOK	6530	1/04/86	23	4.5	5.5	4.4
HOOD MEADOW	6600	1/02/86	13	2.4	3.6	5.3
HOODOO BASIN	6050	12/28/85	49	16.7	37.0	20.1
HOODOO BASIN BUTYL	6050	1/01/86	---	13.8	30.7	18.6
HOODOO CREEK	5900	12/28/85	39	12.6	33.6	17.8
JOHNSON PARK	6450	12/27/85	14	2.8	3.8	3.3
KINGS HILL	7500	12/30/85	30	8.0	8.0	6.7
KIWANIS CAMP	3720	12/27/85	11	1.8	1.4	1.1
KRAFT CREEK METAL	4750	1/01/86	---	4.1	9.1	5.5
LAKEVIEW CANYON	6930	12/26/85	19	3.9	5.8	5.4
LAKEVIEW RIDGE	7400	12/26/85	18	4.0	5.6	4.8
LAKEVIEW RDG. METAL	7400	1/01/86	---	5.5	6.0	5.1
LEMHI RIDGE	8100	12/30/85	16	3.5	5.4	--
LEMHI RIDGE BUTYL	8100	1/01/86	---	3.9	5.4	4.8
LICK CREEK	6860	1/02/86	13	2.4	3.7	4.2
LICK CREEK BUTYL	6860	1/01/86	---	3.4	3.9	3.9
LONE MOUNTAIN	8880	1/02/86	29	8.0	11.8	10.0
LOST HORSE	5940	12/27/85	25	7.4	18.3	13.3
LOWER TWIN METAL	7900	1/01/86	---	9.2	10.3	9.6
LUBRECHT FLUME	4680	12/31/85	9	1.5	2.4	2.8
LUBRECHT FLUME BUTYL	4680	1/01/86	---	2.2	3.1	2.1
LUBRECHT FOREST NO 3	5450	12/30/85	11	2.0	3.2	2.8
LUBRECHT FOREST NO 4	4650	12/30/85	6	1.2	1.6	1.7
LUBRECHT FOREST NO 6	4040	12/30/85	6	1.2	1.8	1.9
LUBRECHT HYDROPLOT	4200	12/31/85	9	1.2	2.0	3.0
MADISON PLATEAU	7750	12/27/85	35	10.6	11.8	9.5
MADISON PLT BUTYL	7750	12/27/85	---	10.4	11.8	10.0
MANY GLACIER	4900	12/27/85	18	4.8	15.4	9.8
MANY GLACIER BUTYL	4900	1/01/86	---	3.7	13.7	9.2
MARIAS PASS	5250	1/02/86	21	4.7	15.0	6.9
MAYNARD CREEK	6210	12/31/85	14	3.0	5.7	6.4
MAYNARD CREEK BUTYL	6210	12/31/85	---	2.6	3.8	5.5
MONUMENT PEAK METAL	8850	1/01/86	---	10.1	9.2	10.2
MOULTON RESERVOIR	6850	12/27/85	12	1.0	3.5	3.1
MOUNT LOCKHART	6400	12/30/85	37	9.6	14.2	9.0
MT LOCKHART BUTYL	6400	1/01/86	---	10.1	12.8	9.1
NEVADA CREEK METAL	6480	1/01/86	---	1.3	8.5	4.1
NEZ PERCE CAMP	5650	12/31/85	15	3.6	7.4	--
NEZ PERCE CMP BUTYL	5650	1/01/86	---	3.4	7.9	6.4
NOISY BASIN	6040	1/07/86	66	19.5	30.9	17.8
NOISY BASIN BUTYL	6040	1/01/86	---	14.5	26.1	15.9
NORTH FORK ELK CREEK	6250	12/31/85	16	3.6	7.3	5.4
N.FORK ELK CRK BUTYL	6250	1/01/86	---	3.7	6.9	4.7
NORTH FORK JOCKO	6330	1/09/86	64	17.0	20.2	19.3
NORTHEAST ENTRANCE	7350	12/30/85	15	2.7	4.0	4.0
N.E. ENTRANCE BUTYL	7350	1/01/86	---	3.7	4.6	4.1
OPHIR PARK	7150	12/29/85	21	5.7	8.0	7.5
PETERSON MEADOWS	7200	12/27/85	13	2.8	5.5	4.1
PETERSON MDW BUTYL	7200	12/27/85	---	2.6	5.3	4.8
PICKFOOT CRK METAL	6650	1/01/86	---	4.8	4.7	5.4
PIKE CREEK	5930	12/23/85	29	8.2	16.8	--
PIKE CREEK BUTYL	5930	1/01/86	---	9.2	19.0	12.5
PIPESTONE PASS	7200	12/30/85	10	2.0	2.8	2.3
PLACER BASIN METAL	8830	1/01/86	---	8.0	9.0	8.2
POORMAN CRK BUTYL	5100	1/01/86	---	8.9	27.0	12.4
PORCUPINE BUTYL	6500	1/01/86	---	2.2	3.4	2.9
ROCKER PEAK	8000	12/27/85	23	6.1	6.8	6.9
ROCKER PEAK BUTYL	8000	1/01/86	---	6.9	7.4	6.9
ROCKY BOY	4700	12/27/85	11	2.0	3.4	1.9
SADDLE MOUNTAIN	7940	12/26/85	27	7.5	12.2	10.7
SADDLE MTN BUTYL	7900	1/01/86	---	7.8	13.3	11.5
SHOWER FALLS	8100	1/02/86	29	7.8	8.5	11.1
SHOWER FALLS BUTYL	8100	1/01/86	---	8.8	9.0	10.8
SILVER RUN	6630	12/30/85	10	1.5	1.6	2.4
SILVER RUN BUTYL	6630	1/01/86	---	2.2	1.6	1.5
SKALKAHO SUMMIT	7250	12/30/85	24	6.2	11.7	11.8
SKALKAHO SUMMIT BTYL	7260	1/01/86	---	6.3	12.2	12.3
SKYLARK TRAIL METAL	6200	1/01/86	---	8.4	17.8	10.0
SOUTH FORK SHIELDS	8100	12/26/85	29	8.0	9.5	--
S.FK. SHIELDS BUTYL	8100	1/01/86	---	6.6	7.7	6.8
SPOTTED BEAR MTN.	7000	1/01/86	---	6.8E	9.2	7.1
SPUR PARK	8100	12/30/85	38	11.3	10.6	9.6
SPUR PARK BUTYL	8100	1/01/86	---	12.1	12.2	10.4
STAHL PEAK BUTYL	6030	1/01/86	---	12.5	23.3	17.2
STORM LAKE	7780	12/27/85	17	3.6	7.1	5.6
SUCKER CREEK	3960	12/27/85	5	.8	.6	.4
TAYLOR ROAD	4080	12/27/85	15	2.7	3.8	1.9
TEN MILE LOWER	6600	12/26/85	15	3.1	4.0	3.1
TEN MILE MIDDLE	6800	12/26/85	23	6.0	5.9	4.7
TEN MILE UPPER	8000	12/26/85	23	6.2	6.8	5.7
TEPEE CREEK BUTYL	8000	1/01/86	---	6.6	5.7	5.9
TRINKUS LAKE	6100	1/01/86	---	11.0E	28.4	18.2
TRUMAN CREEK	4060	12/28/85	11	1.9	3.2	1.6
TWELVEMILE CREEK	5600	12/27/85	20	5.9	11.6	8.5
TWELVEMILE BUTYL	5600	1/01/86	---	4.3	9.7	7.3
TWENTY-ONE MILE	7150	12/31/85	27	6.8	8.7	7.7
TWIN CREEKS	3580	1/04/86	30	6.0	8.0	5.7
TWIN LAKES	6510	12/27/85	33	10.1	23.8	17.2
TWIN LAKES BUTYL	6400	1/01/86	---	10.6	21.9	17.2
UPPER HOLLAND LAKE	6200	1/09/86	55	14.2	21.6	15.4
WALDRON	5600	12/30/85	15	2.8	7.4	3.9
WALDRON BUTYL	5600	1/01/86	---	3.2	7.3	4.7
WARM SPRINGS	7800	12/30/85	25	6.4	7.8	10.6
WARM SPRINGS BUTYL	7800	1/01/86	---	9.1	8.1	11.6
WEST YELLOWSTONE	6700	12/31/85	23	5.5	7.7	5.0
WEST YELL'ST BUTYL	6700	12/31/85	---	4.9	6.0	4.3
WHISKEY CREEK	6800	12/27/85	35	10.2	12.0	7.1
WHISKEY CREEK BUTYL	6800	1/01/86	---	8.7	10.0	7.3
WHITE MILL BUTYL	8700	1/01/86	---	10.5	12.5	11.0
WILLOW CREEK	6500	12/30/85	15	3.7	2.9	3.8
WOOD CREEK METAL	5960	1/01/86	---	3.5	9.5	5.1

Montana
Water Supply Outlook

and

Federal – State – Private
Cooperative Snow Surveys

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U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

STREAMFLOW PROSPECTS FOR MONTANA
Spring and Summer Period

STREAM FLOW PROSPECTS

- MUCH ABOVE AVERAGE (over 130%)
- ABOVE AVERAGE (110-130%)
- NEAR AVERAGE (90-110%)
- BELOW AVERAGE (70-90%)
- MUCH BELOW AVERAGE (below 70%)
- NOT FORECAST

0 25 50 75 100 MI

0 50 100 150 KM

SOURCE:
Information provided by SCS Snow Survey Personnel.

JUNE 1985 4-R-39296

USDA SCS FORT WORTH, TEXAS 1985

GENERAL OUTLOOK

SUMMARY:

Beginning last August, the precipitation pattern across Montana became quite favorable for average or above average precipitation. However, December moisture in the mountains was only 20 to 60 percent of average. Currently, the water supply outlook varies from near average to below average.

SNOWPACK:

Usually by January 1, about 40 percent of the season's snowpack has accumulated. In early December, snowpacks were above average in most areas. However, by the start of the new year, most of the state had below average snowpack. The Bitterroot and parts of the Big Hole and Upper Clark Fork drainages have well below average snow storage levels. The southwest, south-central and central areas have near average snow. There is also an area along the Continental Divide near the Flathead-Marias divide that has near average snowpack. The Bear Paw Mountains south of Havre have above average snow cover. Soils under the snowpack are generally wetter than normal in the Flathead, Sun-Teton-Marias, St. Mary's-Milk River drainages, and in the extreme southwest corner of the state. Most other areas have about average moisture levels except for drier than normal soils in some of the lower Yellowstone drainages.

PRECIPITATION:

August and September precipitation helped replenish some of the soil moisture depleted during last summer's drought. Moisture continued to be near or above average in October and November. In December, all areas picked up below average precipitation. The total water year moisture now varies from about 70 percent of average in the Gallatin drainage to a little above average in the Sun-Teton-Marias and St. Mary's-Milk basins.

RESERVOIRS:

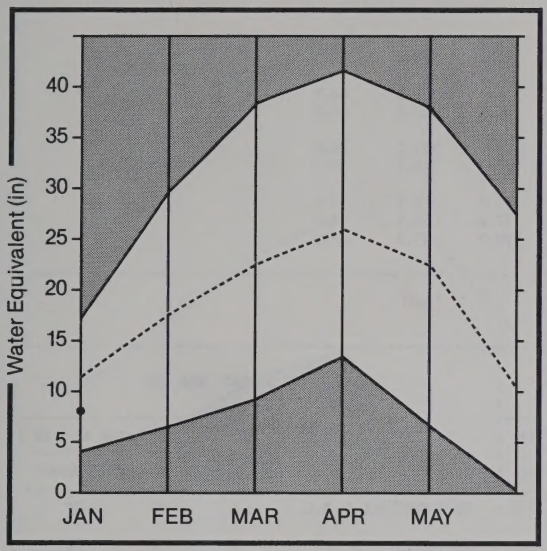
Most reservoirs in the state have near average storage.

STREAMFLOW:

Current forecasts are for streamflows a little below average for most drainages. Below average runoff is predicted for the Bitterroot, Blackfoot, Upper Clark Fork, Big Hole and Gallatin Rivers.

Kootenai Basin

Mountain snowpack* (inches)



* Kootenai in Montana

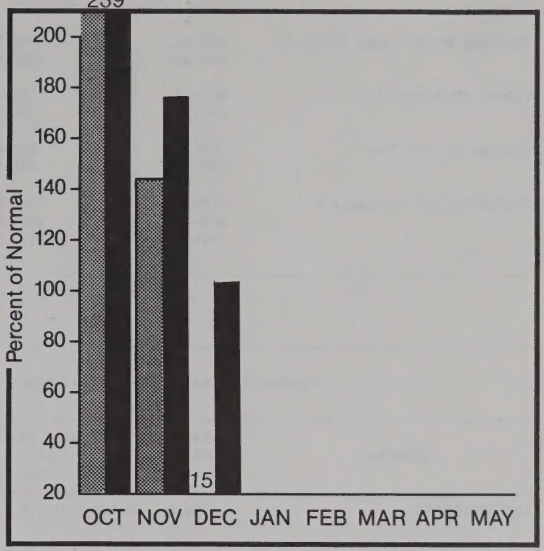
Maximum

Minimum

Average

Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

WATER SUPPLY OUTLOOK:

The snowpack is below average primarily due to December precipitation that was around 15 percent of average. Total precipitation for this water year is about average. Streamflow forecasts based on current snow, precipitation and soil moisture levels are for a little below average runoff during next spring and summer.

For more information contact your local Soil Conservation Service office.

KOOTENAI RIVER BASIN in Montana

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
KOOTENAI RIVER, Libby Inflow *	APR-JUL	6020.0	5900.0	98.0	128.0	68.0				
	APR-SEP	7041.0	6900.0	97.0	128.0	68.0				
FISHER RIVER near Libby	APR-JUL	248.0	215.0	86.0	116.5	56.9				
	APR-SEP	264.0	230.0	87.0	117.0	57.2				
YAAK RIVER near Troy	APR-JUL	500.0	420.0	84.0	114.0	54.0				
	APR-SEP	523.0	445.0	85.0	115.1	55.1				
KOOTENAI RIVER at Leonia *	APR-JUL	7498.0	7340.0	97.0	128.9	66.9				
	APR-SEP	8602.0	8420.0	97.0	128.9	66.9				
	APR-JUN	6051.0	5930.0	98.0	129.0	67.0				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
LAKE KOOCANUSA	5748.0	2971.0	3112.0	3157.0

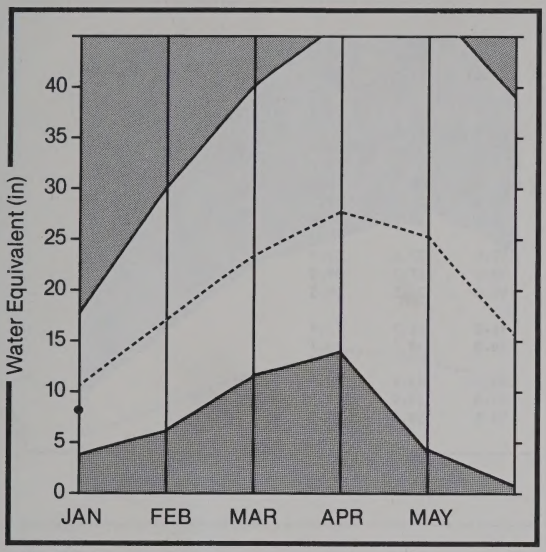
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
EAST KOOTENAI in B.C.	6	87	87
KOOTENAI in MONTANA	8	45	70
KOOTENAI ab BONNERS FERRY	14	64	79

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

Flathead Basin

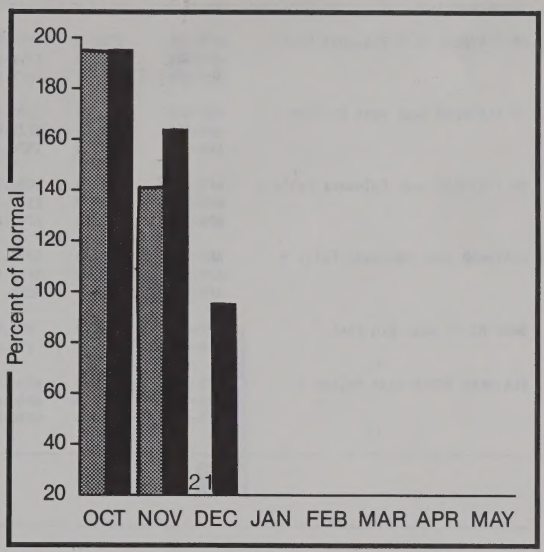
Mountain snowpack* (inches)



* Flathead

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

WATER SUPPLY OUTLOOK:

Early season snowpack started off well, but December precipitation was only 21 percent of average. Mountain snowpack levels are currently 15 to 25 percent below average except near the Continental Divide where snow is near average. Total precipitation for the water year is near average. Mountain soil moisture is generally near to above average. Streamflows for next spring and summer are forecast to be about 5 to 10 percent below average.

For more information contact your local Soil Conservation Service office.

FLATHEAD RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
NF FLATHEAD near Columbia Falls	APR-JUL	1732.0	1550.0	89.0	125.6	53.4				
	APR-SEP	1913.0	1700.0	88.0	124.9	52.8				
	APR-JUN	1471.0	1325.0	90.0	126.1	54.0				
MF FLATHEAD near West Glacier	APR-JUL	1713.0	1600.0	93.0	136.4	50.4				
	APR-SEP	1869.0	1725.0	92.0	135.4	49.3				
	APR-JUN	1453.0	1370.0	94.0	137.3	51.3				
SF FLATHEAD near Columbia Falls *	APR-JUL	2142.0	2030.0	94.0	130.7	58.8				
	APR-SEP	2278.0	2167.0	95.0	131.1	59.1				
	APR-JUN	1886.0	1785.0	94.0	130.6	58.6				
FLATHEAD near Columbia Falls *	APR-JUL	5721.0	5320.0	92.0	127.0	59.0				
	APR-SEP	6208.0	5790.0	93.0	127.3	59.3				
	APR-JUN	4921.0	4550.0	92.0	126.5	58.5				
SWAN RIVER near Big Fork	APR-JUL	604.0	555.0	91.0	111.9	71.9				
	APR-SEP	689.0	625.0	90.0	110.7	70.7				
FLATHEAD RIVER near Polson *	APR-JUL	6712.0	6300.0	93.0	113.9	73.9				
	APR-SEP	7278.0	6840.0	93.0	114.0	74.0				
	APR-JUN	5759.0	5440.0	94.0	114.5	74.5				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CAMAS (4)	45.2	18.3	17.5	18.2
FLATHEAD LAKE	1791.0	1354.0	1017.0	1376.0
HUNGRY HORSE	3451.0	2562.0	2664.0	2614.0
MISSION VALLEY (8)	100.0	37.6	30.1	34.2

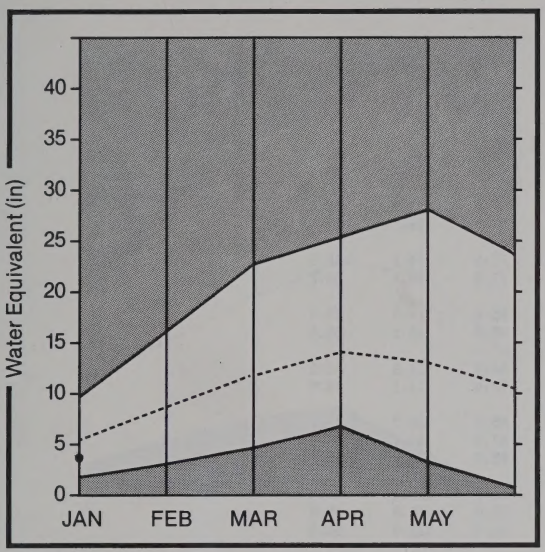
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
LITTLE BITTERROOT	5	55	81
NORTH FORK FLATHEAD	1	54	73
MIDDLE FORK FLATHEAD	9	59	87
SOUTH FORK FLATHEAD	11	59	88
SWAN	8	57	86
STILLWATER-WHITEFISH	3	56	70
FLATHEAD	36	57	84

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

Clark Fork Basin above Missoula

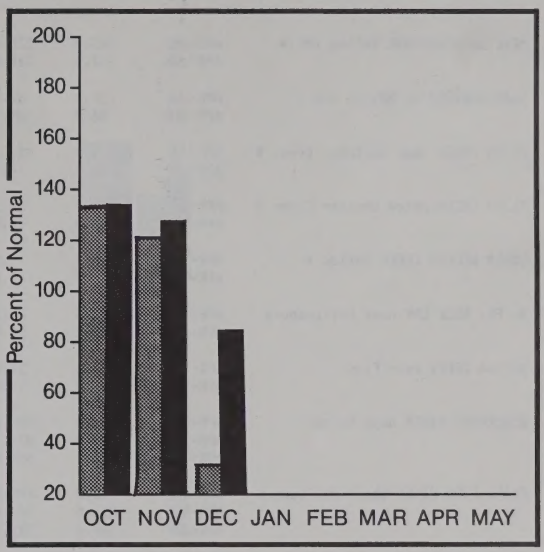
Mountain snowpack* (inches)



* Clark Fork above Missoula

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

WATER SUPPLY OUTLOOK:

Snowpack started at near to a little below average, but December precipitation was only about 31 percent of average. The current snowpack is around 25 to 30 percent below average. Moisture stored in mountain soils under the snow is about average. Streamflow forecasts are generally in the range of 10 to 15 percent below average.

For more information contact your local Soil Conservation Service office.

CLARK FORK RIVER BASIN above Missoula

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
MOULTON RESERVOIR Inflow (MG)*	APR-JUL	263.0	225.0	85.0	115.6	55.5				
	APR-JUN	237.0	205.0	86.0	116.5	56.5				
WARM SPRINGS at Nevers Dam *	APR-JUL	37.8	33.5	88.0	119.0	58.2				
	APR-SEP	46.8	41.5	88.0	119.7	57.7				
FLINT CREEK near Southern Cross *	APR-JUL	15.4	13.6	88.0	129.9	45.5				
	APR-SEP	18.3	16.0	87.0	125.7	49.2				
FLINT CREEK below Boulder Creek *	APR-JUL	59.9	52.5	87.0	126.9	48.4				
	APR-SEP	75.8	66.0	87.0	126.6	47.5				
LOWER WILLOW CREEK Inflow *	APR-JUL	14.9	11.5	77.0	114.1	40.3				
	APR-SEP	15.7	12.2	77.0	114.6	38.2				
M. FK. ROCK CRK near Philipsburg	APR-JUL	70.5	60.0	85.0	114.9	55.3				
	APR-SEP	78.2	66.5	85.0	115.1	55.0				
NEVADA CREEK near Finn	APR-JUL	21.3	18.0	84.0	126.8	42.3				
	APR-SEP	23.0	19.4	84.0	126.1	43.5				
BLACKFOOT RIVER near Bonner	APR-JUL	904.0	770.0	85.0	128.2	42.1				
	APR-SEP	999.0	870.0	87.0	130.1	44.0				
	APR-JUN	782.0	665.0	85.0	128.0	42.1				
CLARK FORK RIVER above Milltown *	APR-JUL	708.0	605.0	85.0	121.5	49.4				
	APR-SEP	816.0	700.0	85.0	121.8	49.8				
	APR-JUN	597.0	515.0	86.0	122.3	50.3				
CLARK FORK RIVER above Missoula	APR-JUL	1612.0	1375.0	85.0	127.3	43.3				
	APR-SEP	1815.0	1570.0	86.0	128.5	44.5				
	APR-JUN	1379.0	1180.0	85.0	127.6	43.6				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
GEORGETOWN LAKE	31.0	23.8	27.0	28.0
LOWER WILLOW CREEK	4.9	1.6	0.3	1.2
NEVADA CREEK	12.6	5.3	4.3	3.7

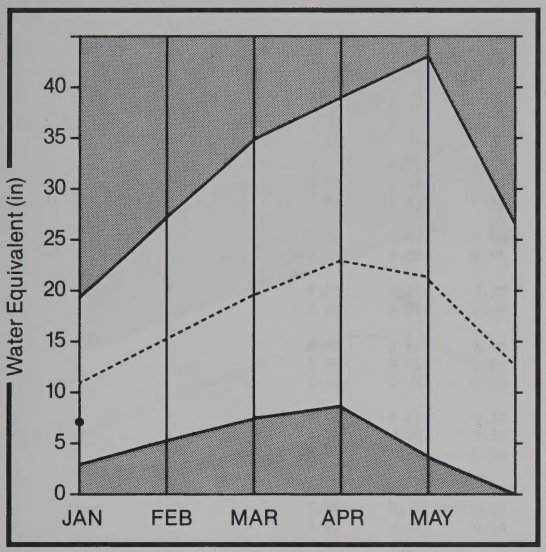
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
CLARK FORK ab BLACKFOOT	31	64	70
BLACKFOOT	15	60	71
CLARK FORK above MISSOULA	47	61	70

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

Clark Fork Basin below Missoula

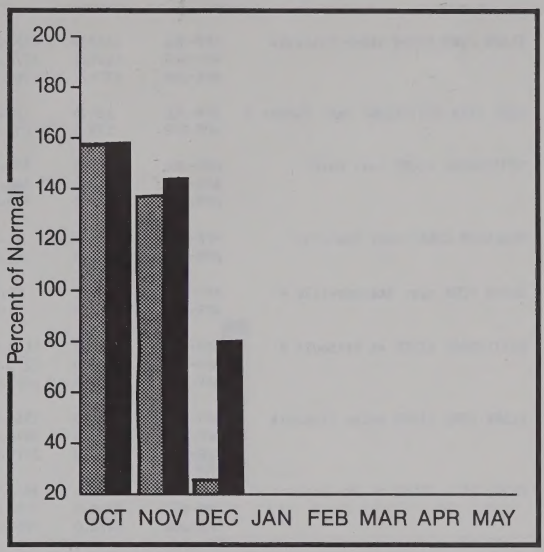
Mountain snowpack* (inches)



* Bitterroot

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

WATER SUPPLY OUTLOOK:

The snowpack is below average over the lower part of the watershed and well below average in the Bitterroot River drainage. Mountain precipitation was about 24 percent of average for December. Since October 1, the total precipitation is about 85 percent of average. Under the snowpack, soil moisture is about average. Streamflow forecasts for spring and summer runoff are generally about 15 to 20 percent below average.

For more information contact your local Soil Conservation Service office.

CLARK FORK RIVER BASIN below Missoula

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
CLARK FORK RIVER above Missoula	APR-JUL	1612.0	1375.0	85.0	127.3	43.3				
	APR-SEP	1815.0	1570.0	86.0	128.5	44.5				
	APR-JUN	1379.0	1180.0	85.0	127.6	43.6				
WEST FORK BITTERROOT near Conner *	APR-JUL	164.0	135.0	82.0	112.2	52.4				
	APR-SEP	178.0	145.0	81.0	111.2	51.7				
BITTERROOT RIVER near Darby	APR-JUL	532.0	440.0	82.0	112.8	52.6				
	APR-SEP	580.0	480.0	82.0	112.8	52.8				
	APR-JUN	464.0	390.0	84.0	114.0	54.1				
SKALKAHO CREEK near Hamilton	APR-JUL	48.7	41.5	85.0	104.7	65.7				
	APR-SEP	56.0	47.5	84.0	105.4	64.3				
BURNT FORK near Stevensville *	APR-JUL	32.2	27.5	85.0	114.9	55.9				
	APR-SEP	37.4	31.5	84.0	115.0	53.5				
BITTERROOT RIVER at Missoula *	APR-JUL	1384.0	1170.0	84.0	128.6	40.5				
	APR-SEP	1504.0	1275.0	84.0	128.8	40.8				
	APR-JUN	1191.0	1015.0	85.0	129.2	41.2				
CLARK FORK RIVER below Missoula	APR-JUL	2996.0	2560.0	85.0	123.4	47.5				
	APR-SEP	3319.0	2840.0	85.0	123.5	47.6				
	APR-JUN	2570.0	2195.0	85.0	123.4	47.4				
CLARK FORK RIVER at St. Regis	APR-JUL	3928.0	3410.0	86.0	122.8	50.8				
	APR-SEP	4411.0	3780.0	85.0	121.7	49.7				
	APR-JUN	3428.0	2950.0	86.0	122.1	50.1				
CLARK FORK RIVER near Plains *	APR-JUL	11071.0	9930.0	89.0	119.7	59.7				
	APR-SEP	12153.0	10900.0	89.0	119.7	59.7				
	APR-JUN	9459.0	8513.0	89.0	120.0	60.0				
THOMPSON RIVER near Thompson Falls	APR-JUL	233.0	205.0	87.0	115.9	60.1				
	APR-SEP	261.0	230.0	88.0	116.1	60.2				
PROSPECT CREEK at Thompson Falls	APR-JUL	132.0	115.0	87.0	117.4	56.8				
	APR-SEP	142.0	125.0	88.0	118.3	57.7				
CLARK FORK at Whitehorse Rapids *	APR-JUL	12351.0	10900.0	88.0	119.3	57.3				
	APR-SEP	13575.0	12000.0	88.0	119.4	57.4				
	APR-JUN	10570.0	9300.0	87.0	119.0	57.0				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
COMO	34.9	11.8	7.1	8.5
NOXON RAPIDS	335.0	301.1	318.0	316.8
PAINTED ROCKS		NO REPORT		

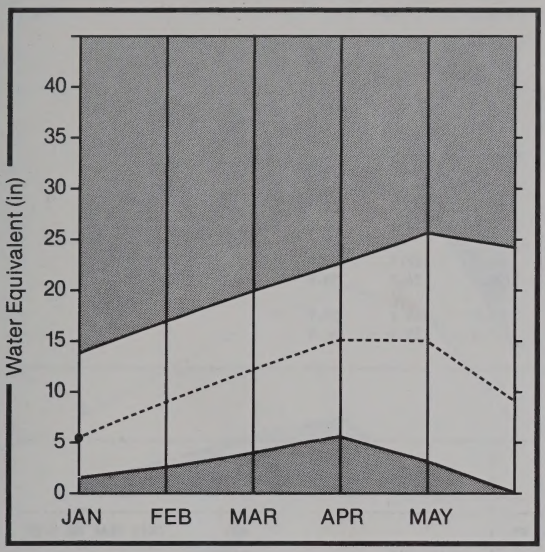
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
CLARK FORK above MISSOULA	47	61	70
BITTERROOT	14	50	62
LWR CLARK FK blw MISSOULA	8	40	74
CLARK FORK	67	52	69
FLATHEAD	36	57	84
PEND O'REILLE	103	54	76

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

Jefferson Basin

Mountain snowpack* (inches)



* Jefferson

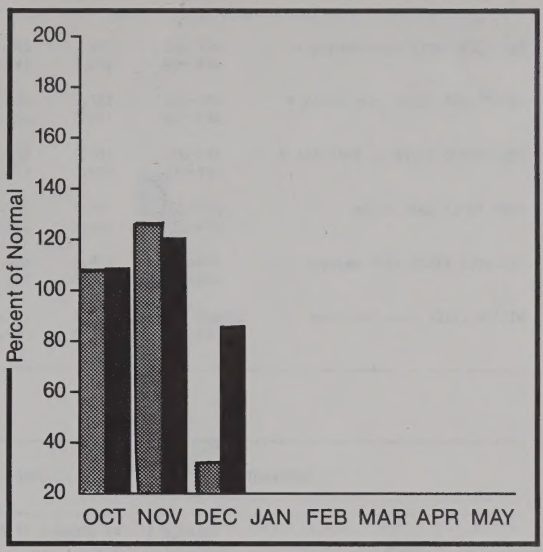
Maximum

Minimum

Average

Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

WATER SUPPLY OUTLOOK:

Snowpack varies from well below average in the northern part of the watershed, to near average in the south. Mountain precipitation during December was only about 31 percent of average. Since October 1, the total precipitation has been about 84 percent of average. Soil moisture under the snow is about average in the northern part of the watershed and above average in the southern part. Forecasts are for near to a little above average runoff from southern drainages dropping to below average in the Big Hole.

For more information contact your local Soil Conservation Service office.

JEFFERSON RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
RED ROCK RIVER near Monida *	APR-JUL	96.0	105.0	109.0	149.0	69.8				
	APR-SEP	103.0	113.0	109.0	149.5	69.9				
BEAVERHEAD RIVER near Grant *	APR-JUL	137.0	145.0	105.0	146.0	65.7				
	APR-SEP	158.0	165.0	104.0	144.3	64.6				
BEAVERHEAD RIVER at Barratts *	APR-JUL	180.0	180.0	100.0	140.0	60.0				
	APR-SEP	209.0	210.0	100.0	140.7	60.3				
RUBY RIVER near Alder	APR-JUL	85.0	90.0	105.0	142.4	69.4				
	APR-SEP	101.0	105.0	103.0	139.6	68.3				
BIG HOLE RIVER near Melrose	APR-JUL	698.0	650.0	93.0	127.1	59.2				
	APR-SEP	760.0	705.0	92.0	126.7	58.8				
WILLOW CREEK near Harrison	APR-JUL	17.9	17.0	94.0	134.1	55.9				
	APR-SEP	20.0	19.0	95.0	135.0	55.0				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CLARK CANYON	257.0	129.5	149.9	135.3
LIMA	84.0	23.0	23.7	34.7
RUBY	38.8	22.5	19.2	19.6

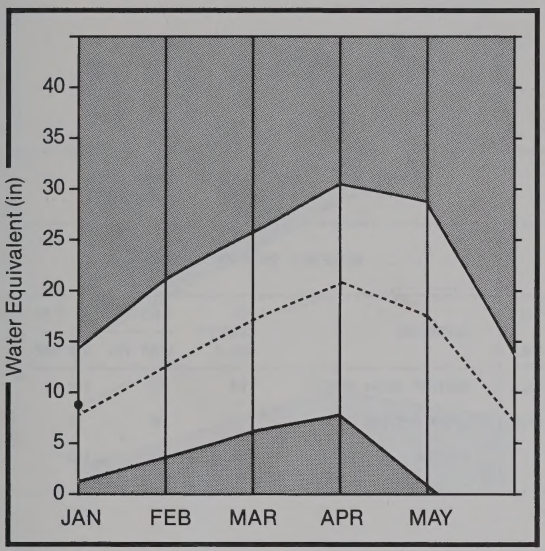
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
BEAVERHEAD	14	83	102
RUBY	4	98	102
BIGHOLE	14	55	68
BOULDER	11	75	90
JEFFERSON	43	73	87

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

Madison Basin

Mountain snowpack* (inches)



* Madison

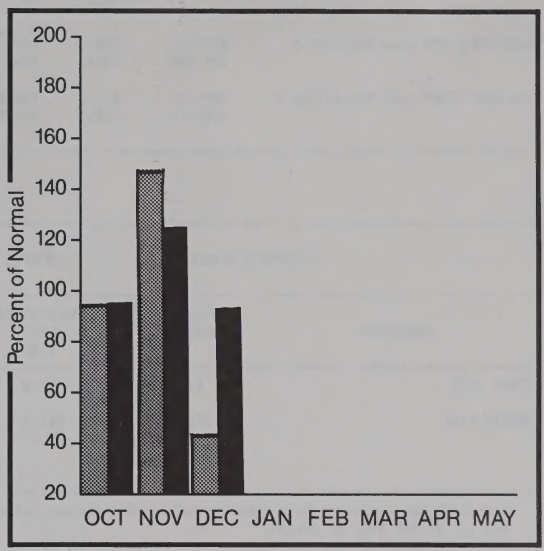
Maximum

Minimum

Average

Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

WATER SUPPLY OUTLOOK:

Snowpack is near average over most of the headwater area dropping to below average downstream. During December, mountain precipitation was about 43 percent of average. Since October 1, the total precipitation has been 93 percent of average. The amount of moisture stored in the soil under the snowpack is about average. Spring and summer streamflow is forecast to be a little above average based on current levels of snow, precipitation and soil moisure.

For more information contact your local Soil Conservation Service office.

MADISON RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
MADISON RIVER near Grayling *	APR-JUL	388.0	430.0	110.0	130.9	90.7				
	APR-SEP	496.0	545.0	109.0	129.8	89.9				
MADISON RIVER near McAllister *	APR-JUL	672.0	705.0	104.0	126.9	82.9				
	APR-SEP	848.0	875.0	103.0	125.2	81.1				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
ENNIS LAKE	41.0	29.9	32.6	35.3
HEBGEN LAKE	378.0	277.3	311.3	232.8

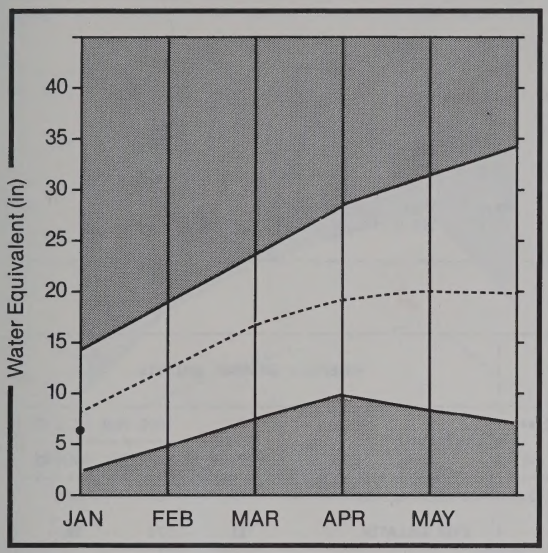
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
MADISON above HEBGEN	15	82	106
LOWER MADISON	9	88	92
MADISON	24	84	101

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

Gallatin Basin

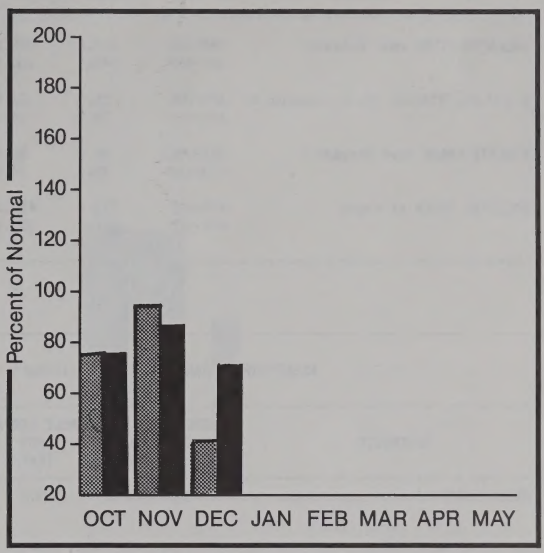
Mountain snowpack* (inches)



*Gallatin

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

WATER SUPPLY OUTLOOK:

Snowpack is below average over the entire drainage but is lower in the Bridger Mountains than in the southern areas. During December, mountain precipitation was about 40 percent of average. Since October 1, the total precipitation has been about 71 percent of average across the Gallatin River drainage. Soil moisture stored under the snowpack is a little lower than normal. Forecasts are for below average runoff during the spring and summer season.

For more information contact your local Soil Conservation Service office.

GALLATIN RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
GALLATIN RIVER near Gateway	APR-JUL	464.0	415.0	89.0	111.4	67.5				
	APR-SEP	545.0	480.0	88.0	110.1	66.1				
E & W FK. HYALITE CRK nr Bozeman *	APR-JUL	25.0	21.0	84.0	104.0	64.0				
	APR-SEP	29.0	24.0	82.0	103.4	62.1				
HYALITE CREEK near Bozeman *	APR-JUL	39.0	33.0	84.0	107.7	61.5				
	APR-SEP	45.0	38.0	84.0	108.9	60.0				
GALLATIN RIVER at Logan	APR-JUL	523.0	450.0	86.0	116.1	56.0				
	APR-SEP	611.0	525.0	85.0	115.9	56.0				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
MIDDLE CREEK	8.0	5.7	3.8	2.9

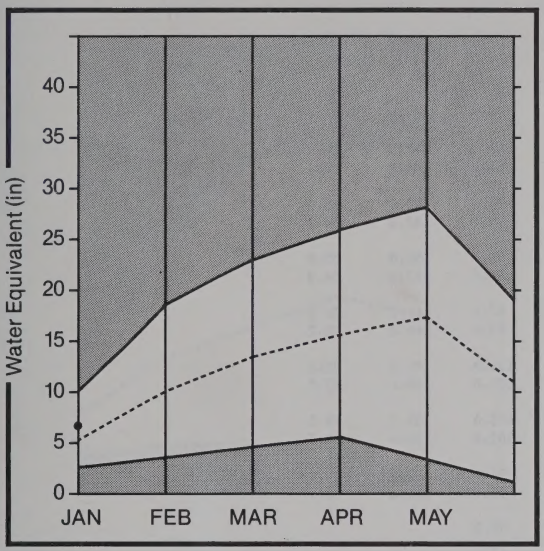
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
UPPER GALLATIN	9	84	82
EAST GALLATIN	11	70	58
GALLATIN	20	78	70

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

Missouri Basin

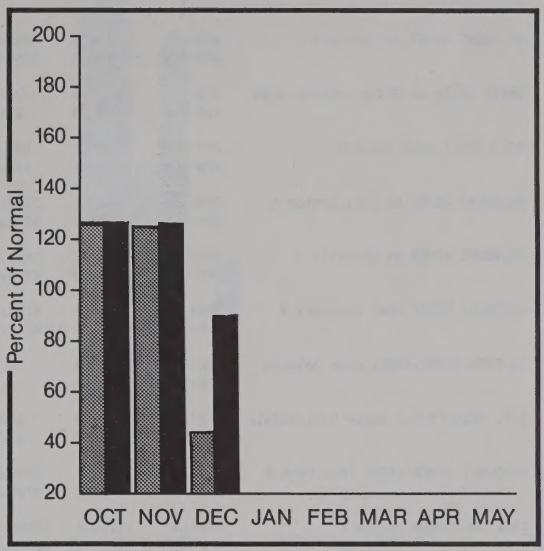
Mountain snowpack* (inches)



*Missouri Toston to Fort Peck

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

WATER SUPPLY OUTLOOK:

Snowpack varies from near average across the southern half to below average in the northern half. Snow in the Bear Paw Mountains is above average. Precipitation accumulated since October 1 has been 92 percent of average while December precipitation has been only about 43 percent of average. Soil moisture under the snowpack is about average in the southern half of the watershed increasing to above average in the northern half. Most drainages are forecast to have near average runoff.

For more information contact your local Soil Conservation Service office.

MISSOURI RIVER BASIN

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
MISSOURI RIVER at Toston *	APR-JUL	2196.0	2065.0	94.0	136.2	52.0				
	APR-SEP	2545.0	2394.0	94.0	136.1	58.1				
SHEEP CREEK nr White Sulphur Spgs.	APR-JUL	19.0	20.0	105.0	152.6	57.9				
	APR-SEP	22.0	23.5	106.0	150.0	63.6				
BELT CREEK near Monarch	APR-JUL	123.0	130.0	105.0	145.5	65.9				
	APR-SEP	134.0	140.0	104.0	144.8	64.2				
MISSOURI RIVER at Fort Benton *	APR-JUL	3468.0	3295.0	95.0	148.0	55.0				
	APR-SEP	3980.0	3750.0	94.0	147.2	54.2				
MISSOURI RIVER at Virgelle *	APR-JUL	4030.0	3870.0	96.0	158.0	55.0				
	APR-SEP	4570.0	4355.0	95.0	157.3	54.3				
MISSOURI RIVER near Landusky *	APR-JUL	4383.0	4295.0	97.0	161.0	56.0				
	APR-SEP	4980.0	4840.0	97.0	160.2	55.2				
N. FORK MUSSELSHELL near Delpine	APR-JUL	5.4	5.5	101.0	148.1	55.6				
	APR-SEP	6.4	6.5	101.0	140.6	62.5				
S.F. MUSSELSHELL above Martinsdale	APR-JUL	59.0	62.0	105.0	149.2	61.0				
	APR-SEP	63.0	64.5	102.0	146.0	58.7				
MISSOURI RIVER below Fort Peck *	APR-JUL	4428.0	4295.0	96.0	162.0	52.0				
	APR-SEP	4961.0	4765.0	96.0	163.1	51.0				
LAKE SAKAKAWEA Inflow *	APR-JUL	12239.0	12000.0	98.0						
	APR-SEP	12775.0	12370.0	96.0						

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
CANYON FERRY LAKE	2043.0	1556.0	1548.0	1713.0
HELENA VALLEY	10.4	4.4	3.9	6.1
LAKE HELENA	10.4	10.9	10.9	10.2
HAUSER & HELENA	61.9	63.0	63.0	61.0
HOLTER LAKE	81.9	81.0	38.5	78.2
SMITH RIVER	10.6	3.5	8.3	6.2
NEWLAN CREEK	12.4	9.8	9.8	9.4
BAIR	7.0	0.5	0.4	4.0
MARTINSDALE	23.1	3.6	5.4	9.5
DEADMAN'S BASIN	72.2	26.4	38.4	41.0
FORT PECK LAKE	18.9*	14.1	16.2	15.3

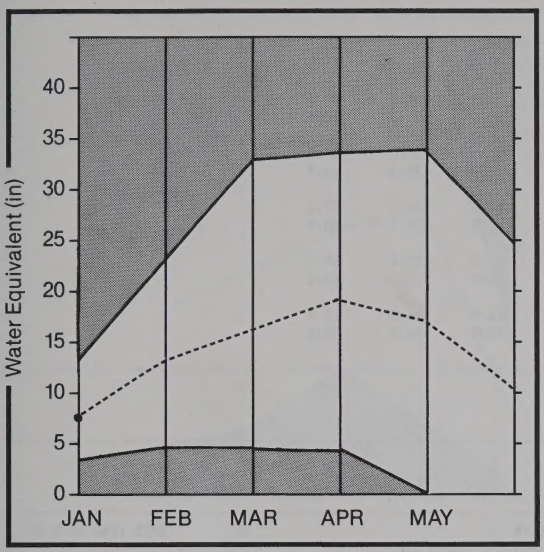
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
MISSOURI HEADWATERS	103	77	83
WEST SIDE MISSOURI	8	74	92
SMITH-BELT	7	90	103
JUDITH-MUSSELSHELL	10	85	98
MISSOURI MAINSTEM	15	83	98
TOSTON to FORT PECK	35	74	95
MISSOURI above FORT PECK	118	76	90
MILK HEADWATERS	4	35	58
MISSOURI in MONTANA	122	74	88
MISSOURI blw YELLOWSTONE	64	102	100

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period. Fort Peck Storage = Million Ac.Ft.

Sun, Teton and Marias Basins

Mountain snowpack* (inches)



* Sun-Teton-Marias

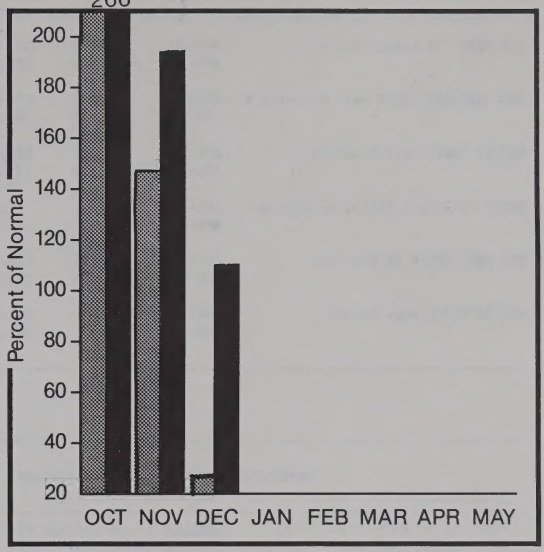
Maximum

Minimum

Average

Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation

Year to date precipitation

WATER SUPPLY OUTLOOK:

Snowpacks vary from near to below average. Early season snowfall was good but moisture dropped off in December when it was only 27 percent of average. Total precipitation since October 1 has been about 110 percent of average. Soils under the snowpack are generally wetter than normal. Spring and summer streamflows are forecast to be near to a little below average based on current snow, precipitation and soil moisture conditions.

For more information contact your local Soil Conservation Service office.

SUN-TETON-MARIAS RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
SUN RIVER at Gibson Dam *	APR-JUL	522.0	525.0	100.0	128.5	72.6				
	APR-SEP	570.0	572.0	100.0	128.4	72.3				
TWO MEDICINE CREEK near Browning *	APR-JUL	235.0	230.0	97.0	137.9	57.9				
	APR-SEP	248.0	240.0	96.0	134.7	58.9				
BADGER CREEK near Browning	APR-JUL	113.0	110.0	97.0	137.2	57.5				
	APR-SEP	130.0	127.0	97.0	135.4	60.0				
SWIFT RESERVOIR Inflow nr Dupuyer	APR-JUL	74.7	72.5	97.0	136.5	57.6				
	APR-SEP	86.7	85.0	98.0	136.1	60.0				
CUT BANK CREEK at Cut Bank	APR-JUL	108.0	105.0	97.0	137.0	57.4				
	APR-SEP	114.0	112.0	98.0	136.0	60.5				
MARIAS RIVER near Shelby	APR-JUL	518.0	500.0	96.0	186.5	65.4				
	APR-SEP	542.0	525.0	96.0	186.7	55.4				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
GIBSON	99.1	71.0	42.5	38.2
PISHKUN	32.0	18.9	18.8	18.1
WILLOW CREEK	32.2	19.3	12.1	20.1
LOWER TWO MEDICINE		NO REPORT		
FOUR HORNS		NO REPORT		
SWIFT	30.0	18.9	6.4	12.6
LAKE FRANCES	112.0	63.1	23.4	70.0
LAKE ELWELL (TIBER)	1347.0	740.0	682.7	550.9

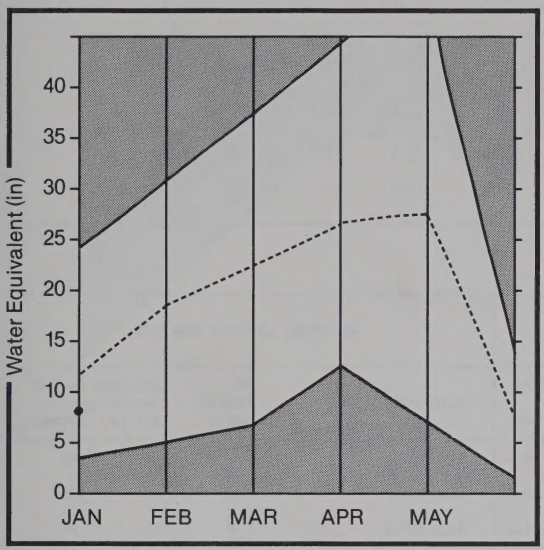
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
SUN-TETON	5	57	92
MARIAS	5	66	91
SUN-TETON-MARIAS	10	63	91

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

St.Mary's and Milk Basins

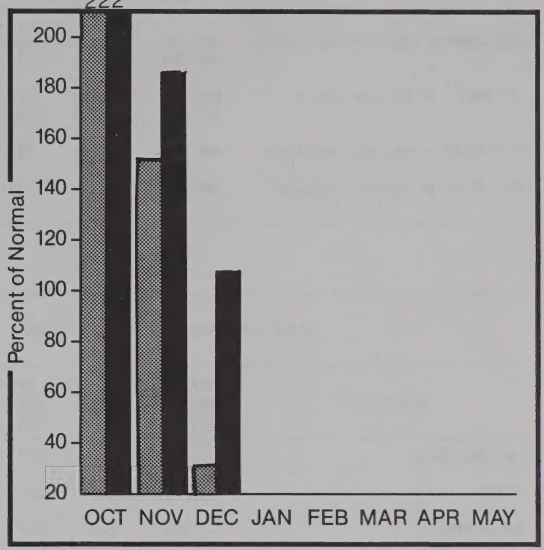
Mountain snowpack* (inches)



* St. Mary's

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

WATER SUPPLY OUTLOOK:

Current snowpack is generally below average in the St. Mary's and Milk River headwaters but above average in the Bear Paw Mountains. Snow accumulation started off well but December precipitation was only about 31 percent of average. Since October 1, total precipitation accumulated across the watershed is a little above (108%) average. Soils under the snowpack are generally wetter than normal. Streamflows are forecast to be about average on the Milk and a little below average on the St. Mary's.

For more information contact your local Soil Conservation Service office.

ST. MARY'S and MILK RIVER BASINS

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
SWIFTCURRENT CREEK at Sherburne *	APR-JUL	112.0	100.0	89.0	115.2	63.4				
	APR-SEP	128.0	115.0	89.0	115.6	64.1				
ST. MARY'S RIVER near Babb *	APR-JUL	416.0	375.0	90.0	110.1	70.2				
	APR-SEP	487.0	440.0	90.0	110.3	70.4				
MILK RIVER at Eastern Crossing *	MAR-SEP	279.0	285.0	102.0	173.1	62.0				
MILK RIVER at Eastern Crossing	MAR-SEP	109.0	109.0	100.0	170.6	59.6				

RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
LAKE SHERBURNE	64.3	32.2	33.9	16.8
FRESNO	127.0	39.9	11.8	60.6
BEAVER CREEK	3.5	2.8	0.9	1.6
NELSON	66.8	30.3	27.0	41.7

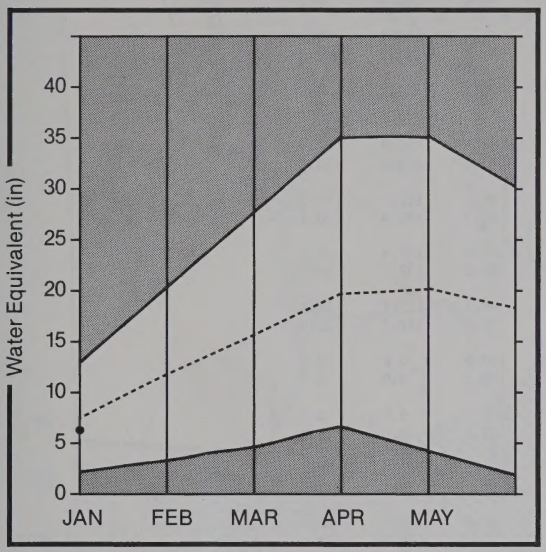
WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	THIS YEAR AS % OF AVERAGE
MILK HEADWATERS	4	35	58
BEAR PAWS	5	65	121
MILK RIVER	9	41	70
ST. MARY'S	5	43	67
BOW RIVER	0	0	0
OLDMAN RIVER in ALBERTA	0	0	0

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.

Yellowstone Basin

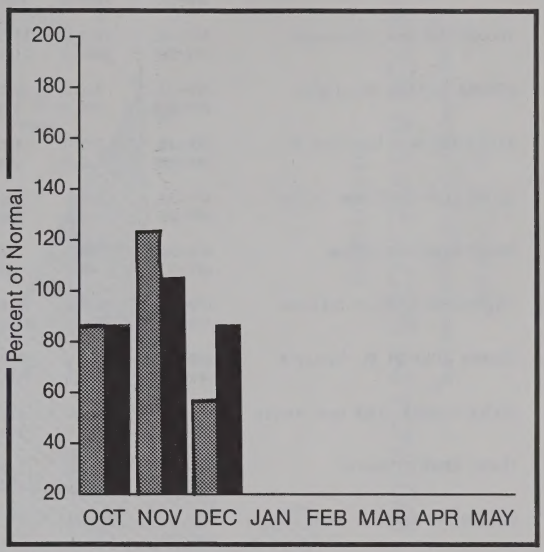
Mountain snowpack* (inches)



* Yellowstone above Big Horn

Maximum
Minimum
Average
Current

Precipitation* (percent of normal)



*Based on selected stations

Monthly precipitation
Year to date precipitation

WATER SUPPLY OUTLOOK:

Snowpacks are generally near average except for a below average area along the Yellowstone River from Yellowstone National Park to the Shields River. December precipitation was about 57 percent of average over the watershed. Since October 1, total precipitation has been about 88 percent of average. Soils under the snowpack have about average levels of moisture except in the Clarks Fork and downstream drainages where they are drier than normal. Streamflows are forecast at near to a little below average.

For more information contact your local Soil Conservation Service office.

STREAMFLOW FORECASTS

FORECAST POINT	FORECAST PERIOD	20 YR. AVE. (1000AF)	MOST PROBABLE (1000AF)	MOST PROBABLE (% AVE.)	REAS. MAX. (% AVE.)	REAS. MIN. (% AVE.)	PEAK FLOW (CFS)	PEAK DATE	LOW FLOW (CFS)	LOW DATE
YELLOWSTONE at Corwin Springs	APR-JUL	1686.0	1600.0	94.0	114.9	74.9				
	APR-SEP	2027.0	1910.0	94.0	114.2	74.2				
YELLOWSTONE near Livingston	APR-JUL	1969.0	1815.0	92.0	112.2	72.2				
	APR-SEP	2379.0	2190.0	92.0	112.1	72.0				
BOULDER RIVER at Big Timber	APR-JUL	366.0	360.0	98.0	126.2	70.5				
	APR-SEP	398.0	390.0	97.0	125.9	70.1				
STILLWATER near Absarokee *	APR-JUL	528.0	515.0	97.0	133.5	61.6				
	APR-SEP	632.0	615.0	97.0	133.4	61.2				
CLARKS FORK RIVER near Belfry	APR-JUL	563.0	500.0	88.0	122.7	54.9				
	APR-SEP	628.0	560.0	89.0	123.4	55.1				
COONEY RESERVOIR Inflow	APR-JUL	49.5	50.0	101.0	137.4	64.6				
	APR-SEP	60.5	61.0	100.0	137.2	64.5				
YELLOWSTONE RIVER at Billings	APR-JUL	3833.0	3610.0	94.0	121.2	66.2				
	APR-SEP	4516.0	4175.0	92.0	119.4	65.4				
BIGHORN RIVER at St. Xavier *	APR-JUL	1794.0	1900.0	105.0	0.0	0.0				
	APR-SEP	1976.0	2080.0	105.0	0.0	0.0				
LITTLE BIGHORN RIVER near Hardin	APR-JUL	162.0	155.0	95.0	0.0	0.0				
	APR-SEP	182.0	171.0	93.0	0.0	0.0				
TONGUE RIVER at Decker	APR-JUL	244.0	225.0	92.0	130.3	54.1				
	APR-SEP	269.0	250.0	92.0	130.9	55.0				
YELLOWSTONE RIVER at Miles City *	APR-JUL	5906.0	5750.0	97.0	130.4	62.4				
	APR-SEP	6787.0	6580.0	96.0	130.0	62.0				
POWDER RIVER at Moorehead	APR-JUL	243.0	260.0	106.0	0.0	0.0				
	APR-SEP	263.0	277.0	105.0	0.0	0.0				
YELLOWSTONE RIVER near Sidney *	APR-JUL	6544.0	6415.0	98.0	133.0	59.0				
	APR-SEP	7518.0	7270.0	96.0	131.7	57.7				

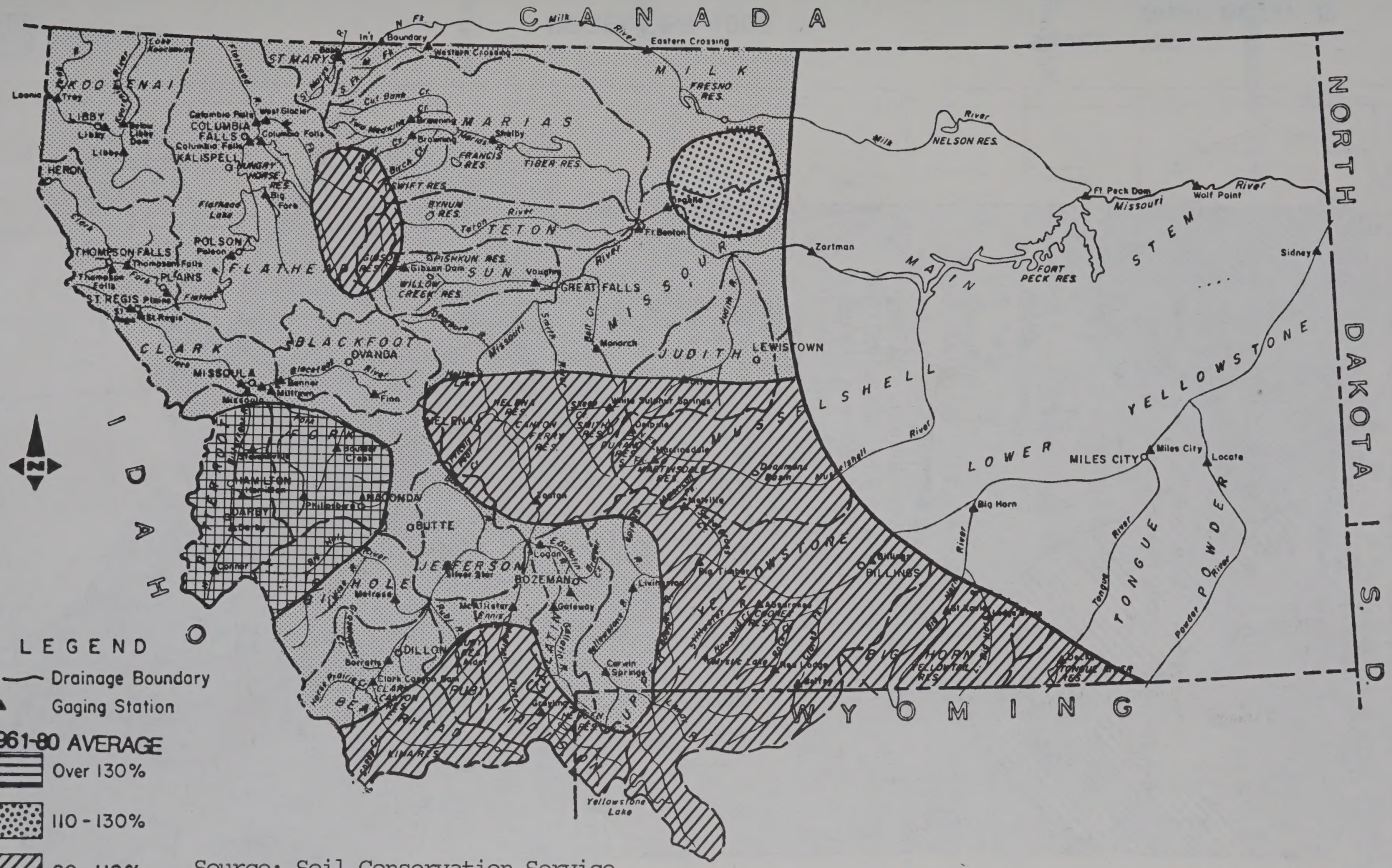
RESERVOIR STORAGE (1000AF)

RESERVOIR	USEABLE CAPACITY	** USEABLE STORAGE ** THIS YEAR	LAST YEAR	AVE.
MYSTIC LAKE	21.0	4.5	6.0	13.5
COONEY	27.4	15.4	17.8	13.6
BIGHORN LAKE	1356.0	768.8	954.6	656.0
TONGUE RIVER	68.0	13.5	18.5	28.6

WATERSHED SNOWPACK ANALYSIS

WATERSHED	NO. COURSES AVE.D	THIS YEAR AS % OF LAST YR.	AVERAGE
YELLOWSTONE ab LIVINGSTON	13	84	91
SHIELDS	6	60	54
BOULDER-STILLWATER	3	101	105
CLARK'S FORK-ROCK CREEK	14	100	92
YELLOWSTONE above BIGHORN	36	87	86
LITTLE BIGHORN	4	147	130
BIGHORN (Bovsen-Bighorn)	23	125	115
UPPER TONGUE RIVER	5	149	138
POWDER RIVER	17	149	118
YELLOWSTONE RIVER	59	104	99

*Corrected for upstream diversions or changes in reservoir storage.
Average is for 1961-80 period.



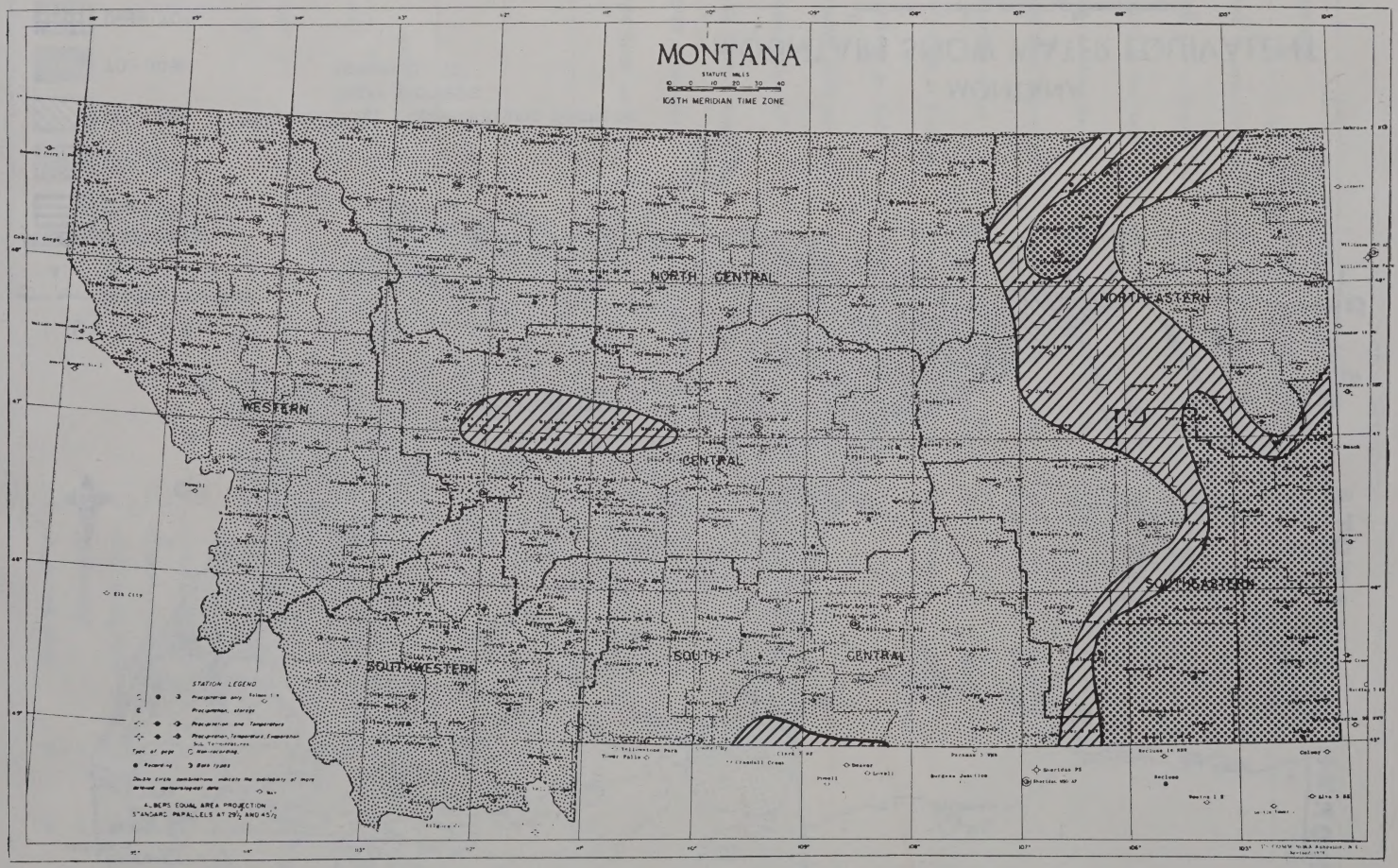
Source: Soil Conservation Service
Snow Surveys
Bozeman, MT

MONTANA
MOUNTAIN SNOW WATER EQUIVALENT

50 0 50 100
SCALE IN MILES

JANUARY 1, 1986

VALLEY PRECIPITATION



Over 120%

80 - 120%

Under 80%

DECEMBER 1985

Source: NWS
Great Falls, MT

The Following Organizations Cooperate With The Soil Conservation Service In Snow Survey Work

Canadian

Department of the Environment
- Atmospheric Environment Service
- Water Management Service

British Columbia Ministry of Environment
- Inventory and Engineering Branch, Hydrology Section

Alberta Environment
- Technical Services Division

Federal

U.S. Department of Agriculture
- Forest Service

U.S. Department of the Army
- Corps of Engineers

U.S. Department of Commerce
- NOAA, National Weather Service
- National Environmental Satellite Service

U.S. Department of the Interior
- Bureau of Indian Affairs
- Fish and Wildlife Service
- Geological Survey
- National Park Service
- Bureau of Reclamation

U.S. Department of Energy
- Bonneville Power Administration

State

Montana Conservation Districts
Montana Department of Fish, Wildlife, and Parks
Montana Department of Natural Resources and Conservation
Montana Department of State Lands
Montana State University - Agricultural Experiment Station
University of Montana - School of Forestry

Private

Big Sky of Montana
Butte Water Company
Flathead Valley Community College
Montana Power Company
Pondera County Canal & Reservoir Company

Other organizations and individuals furnish information for the snow survey reports. Their cooperation is gratefully acknowledged.

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
SNOW SURVEY UNIT
Federal Bldg., Rm. 443
10 East Babcock Street
Bozeman, MT 59715

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